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10/660,952	09/12/2003	Thomas H. James	PD-202107	7018

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PATENT DOCKET ADMINISTRATION RE/R11/A109
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EXAMINER

FAULK, DEVONA E

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2615

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/660,952	Applicant(s) JAMES ET AL.	
	Examiner Devona E. Faulk	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-11,13-20 and 22-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7-11,13,14,16-20,22,23 and 25-27 is/are rejected.
- 7) ☒ Claim(s) 6,15 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/1/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Remarks

1. The applicant amended the claims with subject matter indicated as allowable in the previous office action.
2. The indicated allowability of claims 2-9 and 11-18 is withdrawn in view of the newly discovered reference(s) to Fiocca. Rejections based on the newly cited reference(s) follow.
3. Claims 3, 12 and 21 are cancelled.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 19-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. "An article of manufacture comprising a program storage device ..." is not statutory claim language. It appears Applicant intends to claim a computer readable medium for executing instructions, the instructions being the method steps recited in independent claim 1. An article of manufacture is not statutory. Appropriate correction is required.

Examples of acceptable language in computer-processing related claims :

1. "computer readable medium" encoded with _____
 - [a] "a computer program"
 - [b] "software"
 - [c] "computer executable instructions"
 - [d] "instructions capable of being executed by a computer"

2. "a computer readable medium" _____ "computer program"
[a] storing a
[b] embodied with a
[c] encoded with a
[d] having a stored
[e] having an encoded

If the specification does not support the use of the acceptable language in computer-processing related claims then the applicant will have to amend the claims or submit new ones that meet the requirements under 101.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1,8,10,17 rejected under 35 U.S.C. 102(e) as being anticipated by McDowell (US 6,931,370).

Regarding claim 1, McDowell discloses a method of automatic measurement of audio presence and level by direct processing of a data stream representing an audio signal, comprising:

(a) extracting sub-band data from the data stream (column 3, lines 24-28; implicit) ;

(b) dequantizing and denormalizing the extracted sub-band data (step 126 Figure 8; column 11, lines 6-11);

c) measuring an audio level for the dequantized and denormalized sub-band data without reconstructing the audio signal using channel characteristics (step 130 Figure 9; column 11, lines 58-62; characteristic is defined as a distinguishing feature, quality or property. The examiner asserts that the sub-band data reads on channel characteristics since the sub-band data is implicitly unique to its input signal); and

(d) comparing the measured audio level against at least one threshold (step 136 Figure 9; column 12, lines 3-8).

All elements of claim 10 are comprehended by McDowell as applied above to the rejection of claim 1. McDowell discloses a system and method, the system reading on apparatus (DTS, digital theater system, see title of invention; column 4, lines 50-67; columns 9-12)

All elements of claims 8 and 17 are comprehended by the rejection of claims 10.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US 6,931,370) in view of Fiocca (US 5,625,743).

Regarding claims 2 and 11, McDowell discloses using psychoacoustic measurements and implicitly a psychoacoustic model to determine perceptually irrelevant information (column 11, lines 25-46). McDowell fails to disclose using a psychoacoustic model to determine a perceived level of the measured audio signal. Fiocca discloses using a psychoacoustic model to determine a perceived level of the measured audio signal according to human sensitivity (column 6, lines 57-67). It would have been obvious to modify McDowell so that the psychoacoustic model is used to determine a perceived level of the measured audio signal according to human sensitivity so that cut out unnecessary data in an audio signal thereby reducing the computational load on the processor.

9. Claims 4, 5, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US 6,931,370) in view of Pierret et al. (US 3,843,942).

Regarding claims 4, 5, 13 and 14, McDowell fails to disclose weighting an instantaneous level or an overall level. Pierret discloses weighting an instantaneous level (column 3, lines 60-63). It would have been obvious to modify McDowell to include averaging the audio level over time in order to provide improved automatic volume control.

Regarding claim 5 and 15, the examiner takes official notice that weighting is known in the art and can be applied to any set of data, including sound data. It would

have been obvious to modify McDowell to include weighting of the instantaneous level or the overall level in order to give them more influence in the final result.

10. Claims 7,16 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US 6,931,370) in view of Smith (US 2002/0173864).

Regarding claims 7 and 16, McDowell discloses processing an audio level over time. McDowell fails to disclose averaging the audio level over time. Smith discloses averaging an audio level over time (abstract; page 2, paragraph 0025; page 3, paragraph 0029 and 0037). It would have been obvious to modify McDowell to include averaging the audio level over time in order to provide improved automatic volume control.

11. Claims 9,18 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US 6,931,370) in view of Friedman (US 5,337,041).

Regarding claims 9 and 18, McDowell fails to disclose means for triggering an alarm when the threshold is exceeded. Friedman discloses a means for triggering an alarm when the threshold is exceeded (column 10, line 65-column 11, line 7). It would have been obvious to modify McDowell to include a means for triggering an alarm when the threshold is exceeded in order to provide an audible indication to the user to alert the user of a possible problem.

12. Claims 19,20 and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US 6,931,370) in view of official notice.

Regarding claim 19, McDowell discloses a method and of automatic measurement of audio presence and level by direct processing of a data stream representing an audio signal, comprising:

(a) extracting sub-band data from the data stream (column 3, lines 24-28; implicit) ;

(b) dequantizing and denormalizing the extracted sub-band data (step 126 Figure 9; column 11, lines 6-11);

c) measuring an audio level for the dequantized and denormalized sub-band data without reconstructing the audio signal using channel characteristics (step 30 Figure 9; column 11, lines 58-62; characteristic is defined as a distinguishing feature, quality or property. The examiner asserts that the sub-band data reads on channel characteristics since the sub-band data is implicitly unique to its input signal); and

(d) comparing the measured audio level against at least one threshold (step 136 Figure 9; column 12, lines 3-8).

McDowell fails to disclose an article of manufacture comprising a program storage device embodying executable instructions. The examiner takes official notice that a computer storage medium embodied with a program having executable instructions was known in the art. It would have been obvious to modify McDowell by having an article of manufacture that included a program storage device embodying executable instructions to provide more efficient processing and so that the method of automatic measurement could be applied to various apparatuses.

All elements of claim 26 are comprehended by the rejection of claim 19.

13. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US 6,931,370) in view of official notice in further view of Fiocca (US 5,625,743).

Regarding claim 20, McDowell as modified discloses using psychoacoustic measurements and implicitly a psychoacoustic model to determine perceptually irrelevant information (column 11, lines 25-46). McDowell as modified fails to disclose using a psychoacoustic model to determine a perceived level of the measured audio signal. Fiocca discloses using a psychoacoustic model to determine a perceived level of the measured audio signal according to human sensitivity (column 6, lines 57-67). It would have been obvious to modify McDowell so that the psychoacoustic model is used to determine a perceived level of the measured audio signal according to human sensitivity so that cut out unnecessary data in an audio signal thereby reducing the computational load on the processor.

14. Claims 22,23 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US 6,931,370) in view of official notice in view of Pierret et al. (US 3,843,942).

Regarding claims 22 and 23, McDowell as modified fails to disclose weighting an instantaneous level or an overall level. Pierret discloses weighting an instantaneous level (column 3, lines 60-63). It would have been obvious to modify McDowell as modified to weight the instantaneous level in order to give the instantaneous level more influence than other insignificant data over the final result.

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Regarding claim 23, the examiner takes official notice that weighting is known in the art and can be applied to any set of data, including sound data. It would have been obvious to modify McDowell as modified to include weighting of the instantaneous level or the overall level in order to give them more influence than other insignificant data in the final result.

15. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US 6,931,370) in view of official notice in further view of Smith (US 2002/0173864).

Regarding claim 25, McDowell as modified discloses processing an audio level over time. McDowell as modified fails to disclose averaging the audio level over time. Smith discloses averaging an audio level over time (abstract; page 2, paragraph 0025; page 3, paragraph 0029 and 0037). It would have been obvious to modify McDowell as modified to include averaging the audio level over time in order to provide improved automatic volume control.

Claim Objections

16. Claims 6,8,15,17,24 and 26 are objected to because of the following informalities: Claims 8,17 and 26 recite "thresholding the audio level:. The specifications discloses on page 10, discloses thresholding the power over time. Appropriate correction is required.

Claims 6,15 and 24 are objected to because of the following informalities: Claims 6,15 and 24 recite "wherein the sub-band data represents the audio signal's

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power in each frequency band represented by each sub-band at a particular point in time". The specification discloses, on page 8, line 27-page 9, line 4, that " the audio presence and level function performed by the software program 306 typically involves measuring the power of the sub-band data in the Samples 216, wherein the power is measured as a square root of a sum of squares of the sub-band data. The software 30 program 306 then averages and thresholds the measured power over time to calculate the level. However, the details of the calculation may vary by application.

For audio presence detection, the signal power will go to zero (or below a low threshold). The channel characteristics can be used to determine the length of time the signal power is at zero before considering the audio signal as being lost". The specification does not support the claim language as recited.

17. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over McDowell (US 6,931,370) in view of official notice in view of Friedman (US 5,337,041). Regarding claims 9 and 18, McDowell as modified fails to disclose means for triggering an alarm when the threshold is exceeded. Friedman discloses a means for triggering an alarm when the threshold is exceeded (column 10, line 65-column 11, line 7). It would have been obvious to modify McDowell as modified to include a means for triggering an alarm when the threshold is exceeded in order to provide an audible indication to the user to alert the user of a possible problem.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DEF


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